Z/040/61/000/012/001/001
D005/D102

AUTHORS: Chvátal, Frant., Engineer, Kyzlink, Lad., Engineer, and Čihař, Jiří, Engineer

TITLE: What will be the development of air transportation until 2000

PERIODICAL: Letecký obzor, no. 12, 1961, 398-399

TEXT: This is the first part of an article summarizing the previously published opinions of several experts as to what will be the development of air transportation until 2000. The following are the potential features on which most experts agreed: Maximum range of commercial transports will not exceed 20,000 km, and maximum speed will be between 8 and 10,000 km/hr unless artificial gravity should become feasible. Maximum capacity will be 300-500 passengers which, however, will be fully utilized only by medium- and intermediate-range transports. Vertical take-off and landing will remain limited to the long-range, special-purpose, and very-short-range transports. Long-range (up to 20,000 km) transports will have the shape of rockets with rather small wings. Their speed will be hypersonic (up to 10,000 km) and operating alti-

Card 1/2

What will be the development ...

tude will be from 20 to 100 km. Medium-range (3-6,000 km) transports will be supersonic and will operate at an altitude of about 20 km. Intermediate-range (1-3,000 km) transports will be subsonic. Short-range transports will be subsonic of the VTOL type. Airports will receive multiple parallel runways with lengths not exceeding 3,500 m. Runways will be reinforced for handling 500-ton aircraft. VTOL short- and very-short-range transports will require airports in the form of elevated platforms located within town centers. Air-traffic control will be fully automated. Air traffic controllers and aircraft crews will be limited to checking the automatic instruments, but the pilots will be permitted to override the automatic guidance in emergency cases. Fully automatic landing devices will increase the safety of flying and dependence on the meteorological situation will be reduced to a minimum.

Card 2/2

CIHAR, Jiri, inz.

Problems of the economic effectiveness of airport constructions.
Letecky obzor 6 no.11:346-349 '62.

CIHAR, Jiri, inz.

Winter operations on landing strips. Letecky obzor 7 no.2:36-38 F '63.

CIHAR, Jiri, inz.

Airports for the airplanes of the future. Letecky obzor 7 no.5:130-133 My '63.

PIHAR, Otomar, RNDr.; CIHAR, Milos, Ing.

Determination of succinates in serum. Cas. lek. cesk. 91 no.52:1551-1554 26 Dec 52.

1. Z Ustredniho endokrinologickeho ustavu (reditel doc. MUDr. K. Silink) a z III, interni kliniky Statni fakultni nemocnice v Praze (prednosta Prof. MUDr. J. Charvat).

(SUCCINATES, in blood, determ.)
(BLOOD, succinates, determ.)

CIHAR, M.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Biological Chemistry

Automatic registration of the activity of dehydrogenases. O. Pihar and M. Cihař (Státní fak. nemocnice, Prague, Czech.). *Chem. Listy* 47, 1225-6(1953).—Measurement of the activity of succinodehydrogenase by decolorization of methylene blue solns. is made automatic. The cell of the photometer is combined with the registration device of a polarograph, and the decolorization is followed on the polarographic drum. Co was a strong inhibitor of the succinodehydrogenase and was active even in the concn. of 0.06 γ/ml. M. Hudlický

CZECH

The effect of ferron on succinic dehydrogenase. Miloš Čihař (Ústřední endokrinol. ústav, Prague). *Chem. Listy* 49, 333-9(1955).—Ferron (7-iodo-8-hydroxyquinoline-5-sulfonic acid) (I) has a strong effect on the rate of dehydrogenation of succinate by succinic dehydrogenase. In connection with cytochrome c as H acceptor, the enzyme is activated whereas in the presence of dichloroindophenol, inhibition of the enzyme occurs at low concns. of I. Activation was also observed during manometric detn. of the activity of succinic dehydrogenase. The activation and inhibition of succinic dehydrogenase cannot be explained by an attack on the SH groups, on Slater's factor, or on cytochrome c. An ultraviolet absorption spectrum of I is given.

M. Hudlický

CIHAR, M.

CZECH

Activation of cytochrome oxidase by ferron. Otomar Pihar and Miloš Čihař (Ústřední endokrinol. ústav, Prague). *Chem. Listy* 49, 852-8(1955); cf. preceding abstr.—Cytochrome oxidase and reduced cytochrome c as H donor is a system activated by ferron (I). Activation occurs at concn. of I of 10^{-4} *M* whereas the activation of succinic dehydrogenase with cytochrome c as H acceptor occurs at concn. of I of 10^{-6} *M*. A direct reaction of I with the factors of the enzyme system was not observed. The activation of cytochrome oxidase may be explained by formation of a semiquinnoid radical of I by the reaction with incompletely reduced forms of O_2 and by the carrier function of the oxidation-reduction system ferron-semiquinone.

M. Hudlický

CIHAR, M.

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation: Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague

Source: Prague, Collection of Czechoslovak Chemical Communications, Vol 26, No 10, October 1961, pp 2632-2642

Data: "Enzymic Inactivation of Oxytocin. IV. Characterization of Purified Preparations of Serum Oxytocinase."

Authors:

CIHAR, M
BERANKOVA, Z
RYCHLIK, I
SORM, F

CIHAR, M.; BERANKOVA, Z.; HYCHLIK, I.; SORM, F.

Enzymic inactivation of oxytocin. Part 4: Characterization of purified preparations of serum oxytocinase. Coll Cz Chem 26 no.10:2632-2642 O '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

CZECHOSLOVAKIA

CIHELKA [Affiliation not given]

" Performance Calculation of a Gas Heating System "

Zdravotni Technika a Vzduchotechnika, Prague, Vol 6, N°2,63, pp 83-85

Abstract: On the basis of a Swiss publication on the subject, quoted in the references, the author outlines basic design criteria and considerations in projecting heating systems using gas, particularly for cases of short operating cycles, proposed by foreign sources and compared with domestic standards.

One Western reference.

1/1

CZECHOSLOVAKIA

CIHELKA [Affiliation not given]

" Calculation of Losses in Heating Greenhouses "

Zdravotni Technika a Vzduchotechnika, Prague, Vol 6,№2,63 pp,85-86.

Abstract: On the basis of a work published in Germany, quoted in the references, and domestic standards, the author outlines certain peculiarities relative to cooling of greenhouses in calculating thermal coefficients for determining thermal losses.

One Western reference

1/1

CIHELKA, B.

Electrostatic spraying, p.4. (Technicke Noviny, Praha, Vol 2, No. 20, Oct 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Uses. Part I. Control and Measurement Devices. Automatic Regulation. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 50664

Author : Cihelka, B.
Inst : -
Title : Periodical Measurements and Control of Liquid's Viscosity.

Orig Pub : Stroji-Renstvi, 1957, No 7, No 8, 622-624

Abstract : An automatic regulator features a measuring element, operating on a principle of a floating ball viscosimeter. The difference between the time of falling of the ball and a fixed time is registered by means of an

Card : 1/2

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Uses. Part I. Control and Measurement Devices. Automatic Regulation. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 50664

induction coil and a relay and is manifested as a light signal and a recording. Upon the deviation of the viscosity from the fixed one a dosimeter is activated, which induces the necessary quantity of the solvent into the vessel. -- E. Stefanovskiy

Card : 2/2

Cihelka, B.

An automatic measuring apparatus and regulator of viscosity.

P. 489 (Chemicky Prumysul. Vol. 7, no. 9, Sept. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC Vol. 7, no. 2,
February 1958

CIHELKA, B.

Application of electrostatic processes in the automobile industry. p. 327.

AUTOMOBIL. Praha., Czechoslovakia. Vol. 3, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

CIHELKA, B.

Automatic control of the viscosity of paint. p.7.

CHECHOSLOVAK HEAVY INDUSTRY. (Ceskoslovenska obchodni komora) Paraha, Czechoslovakia. No.7, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol.9, no.1, Jan.1960.

Uncl.

CIHELKA, J., doc. inz. dr.

Effect of atmospheric electricity on the good disposition of man. Zdravot tech 7 no.1:33-34 '64

Problem of using higher temperature of the heating medium in heating houses and buildings. Ibid.:35-37 '64

Brit. Abs. CIHELKA, J. BT-1 Chem. Eng. - & Services

Temperature of heated premises. J. Cihelka. (*Plyn a Voda*, 1949, [illegible], 277—281).—Expressions relating mean inside wall temp. with air temp. of rooms are derived, and their practical application is illustrated. R. Taubcoa.

Brit. Abs CIHELKA, J. B.I.D. Services

Measurements of effective temperatures of surfaces in heated premises. J. Cihelka. (Paliva, 1950, 30, 139—162).—Instruments and methods are described. R. Tauscon.

CIHELKA, J.

F

4501. INDIVIDUAL HEATING BY CLOSE HEATING PANELS. Cihelka, J. (Paliva, (Fuel), May-June 1951, vol. 31, 162-169). Calculations [illegible] shown for the type of heating in which wall panels are provided for, e.g., one man seated at a desk. It is put forward as an occasional alternative to space heating where space heating would be very uneconomical. (L)

ACC NR: AP6009347

second emitter there is formed a contact in the shape of a comb and the parts of the comb engage mutually. The relative position of the contacts is such that the strip forming the contact of the first base is equidistant from the yoke of the comb forming the contact of the second base. The relative position of the strip forming the first emitter and the contact of the second base is such that the yoke of the comb forming the contact of the second base also forms the contact of the first emitter along the part of the strip forming the first emitter.

SUB CODE: 20 / SUBM DATE: 07Oct63

Card 2/2

CIHELKA, J.

Heating industrial plants by suspended radiant-heat panels. p. 278.

Vol. 2, no. 9, Sept. 1954
POZEMNI STAVBY
Praha, Czechoslovakia

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

CIHELKA, J. - Strojirenstvi - Vol. 5, no. 2, Feb. 1955.

Calculation for heating by suspended radiation panels. p. 93.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

CIHELKA, Jaromir

CIHELKA, Jaromir

Dressing principles for work in high temperature. Pracovni lek. 7 no.1:37-42 Feb 55.

1. Ze strojnicke laboratore CSAV.

(HEAT
high environmental temperature in indust., proper clothing of workers)
(INDUSTRIAL HYGIENE
clothing of workers in high temperature environment)
(CLOTHING
for work in high temperature)

CIHELKA, J.

Model tests of automatic ventilating installations. p. 708

STROJIRENSTVI (Ministerstvo tezkeho strojirenstvi, Ministerstvo presneho strojirenstvi a Ministerstvo automobiloveho prumyslu a zemedelskych stroju) Vol. 6, No. 10, Oct. 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

CIHELKA, J.

The distribution of air temperature in a space with heat sources located at different heights (based on experiments with models). In Russian. p. 209. (ACTA TECHNICA, Vol. 1, No. 3, 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

CIHELKA, J.; HUSA, V.

A new method of measuring the residual current in circuit breakers for high and very high voltage. p. 510.
(Elektrotechnicky Obzor, Vol. 45, no. 10, October 1956. Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6, June 1957. Uncl.

CIHELKA, J.

621.317.312 : 621.316.57

670. A NEW METHOD OF MEASUREMENT OF RESIDUAL CURRENTS IN HIGH AND VERY HIGH-VOLTAGE SWITCHGEAR.
V.Hosa and J.Cihelka.
Elektrotech. Obzor, Vol. 45, No. 10, 510-14 (1956). In Czech.

The recovery voltages in switchgear cause residual currents that oscillate with the frequency of the voltage. These currents are only approximately 0.1 per cent of the interrupted short-circuit currents and their measurement, therefore, requires separate instrumentation. A low-cost instrument consisting of a voltage divider, air-core transformer, a length of cable and a c.r.o. is described. The theory of operation is explained and examples taken from practice are given. E.Erdélyi

Cihelka, J.

"The measuring of the convection heat of electric radiators with rotation reflectors.

p. 11 (Sbornik, No. 1, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, VOL. 7, No. 6, June 1958

CIHELKA, J.

A symposium on research and development in heating. p. 159. (Nova Technika, Vol. 2, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

CI[illegible]KA, JA[illegible].

"Salavo vytapeni; theoreticka cast. /Vyd. 1./ Praha, Statni nakl. technicke literatury. /Radiant heating; theoretical part. 1st ed. illus., bibl., diagrs., graphs., index, tables/."

p.200 (1957, Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, 1958

CIHELKA, J.

10073. INCREASED INTERRUPTING CAPACITY OF AIR BLAST CIRCUIT-BREAKERS BY SYNCHRONIZED CONTACT SEPARATION.

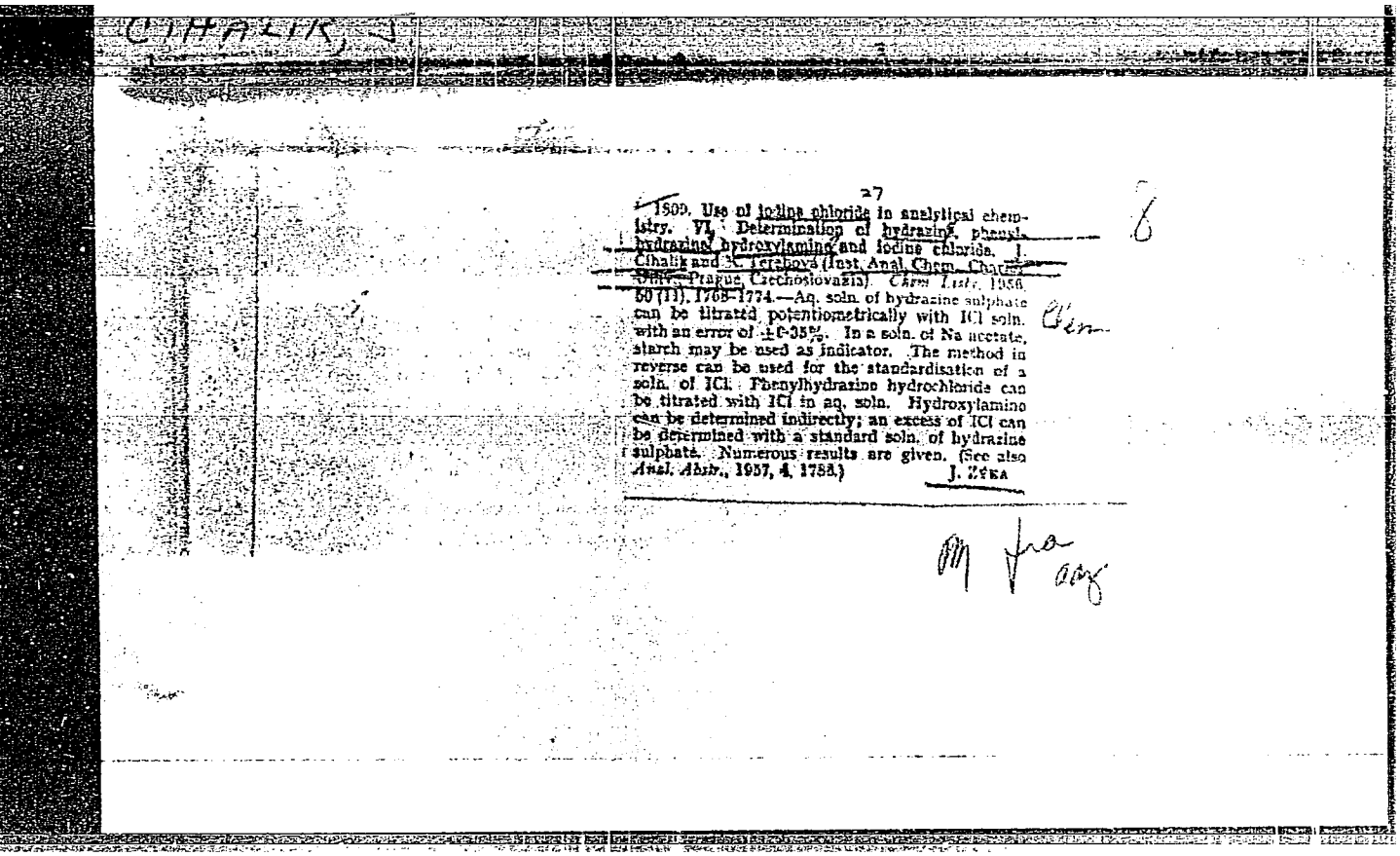
J.Cihelka, L.Cerny, V.Husa, J.Kriz and J.Ladma.

Czech Elektrotech., Vol 11, No 7, 318-20 (July 1957) In German

A report, with oscillograms, of tests on two types of a.c. single-pole circuit-breakers. These tests were carried out to substantiate the theory that the interrupting capacity can be increased by reducing the energy of the arc, by timing the contact separation just prior to zero current, and ensuring sufficient contact clearance at zero current. During tests on the first circuit-breaker with voltages in the region of 10 kV and currents ranging from 2.4 to 20.9 kA it was found that, for high interrupting capacity, it is necessary to dislodge the roots of the arc as quickly as possible from both contacts into regions of high air velocity. The second circuit-breaker, incorporating this feature, was tested at 11.5 kV and with currents up to 114 kA (the capacity of the testing installation). No transient voltage surges, arcing, or contact-wear were observed. Tests on the same circuit-breaker without synchronized contact separation reduced the interrupting capacity to 30 kA while removal of the arc-dislodging features resulted in failure to interrupt even at 20 kA. The illustrations include sketches of the two types of circuit-breaker. It is claimed that the interrupting capacity of circuit-breakers can be increased at least four times by synchronized contact separation.

H.Sterling

RM



CHALIK, J.

27

1509. Use of iodine chloride in analytical chemistry. VI. Determination of hydrazine, phenylhydrazine, hydroxylamine and iodine chloride. J. Chalik and M. Tesařová (Inst. Anal. Chem. Charles Univ., Prague, Czechoslovakia). *Chem. Listy*, 1956, 50 (11), 1768–1774.—Aq. soln. of hydrazine sulphate can be titrated potentiometrically with ICl soln. with an error of ±0·35%. In a soln. of Na acetate, starch may be used as indicator. The method in reverse can be used for the standardisation of a soln. of ICl. Phenylhydrazine hydrochloride can be titrated with ICl in aq. soln. Hydroxylamine can be determined indirectly; an excess of ICl can be determined with a standard soln. of hydrazine sulphate. Numerous results are given. (See also *Anal. Abstr.*, 1957, 4, 1758.) J. ŽÝKA

CIHALÍK, J.

Polarography in anhydrous acetic acid. I. Introduction. Cihalík and Šimek (Charles Univ., Prague) [illegible] study of the following problems was made use of some supporting electrolytes for polarography in anhyd. AcOH, potential of a Pt electrode filled with satd. soln. of LiCl in AcOH, auxiliary curves for the proposed electrolytes and measuring substances. P. Strafelda

CIHELKA, J.

Air temperature in rooms heated by suspended radiating panels. p. 47.

Ceskoslovenska vedecka technicka spolecnost pro zdravotni techniku a vzduchotechniku. SBORNIK. Praha, Czechoslovakia. No. 3, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 10, Oct. 1959.
Uncl.

CIHELKA, J.

TECHNOLOGY

Periodical: ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. Vol. 1, no. 3, 1958.

CIHELKA, J. Contribution to the theoretical solution of natural ventilation. Pt. 1. Raising the temperature in working areas. p. 111.

Monthly List of East European Accession (EEAI) LC, Vol. 8, no. 3
March 1959 Unclass.

CIHELKA, J.

Fight against overheating of rooms. p. 155.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technicka spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia. Vol. 1, no. 4, 1958.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959. Uncl.

CIHELKA, J.

Our present experiences with heating by gas radiators. p. 171.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technika spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia. Vol. 1, no. 4, 1958.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959. Uncl.

H

COUNTRY : CZECHOSLOVAKIA
CATEGORY : Chemical Technology. Chemical Products and Their Uses. Part 1. Safety Techniques. Sani-*
ABS. JOUR. : RZKhim., No. 1 1960, No. 1679

AUTHOR : Cihelka, J.
INST. : Czechoslovak AS
TITLE : Increase of Air Temperature in the Work Zone of a Ventilated Building

ORIG. PUB. : Sb. Ceskosl. ved. techn. spolecn. zdravotni techn. a vzduchotechn. CSAV, 1958, No 2, 11-30
ABSTRACT : The fluctuation of temperatures in a ventilated industrial area in which sources of heat (autoclaves, furnaces, reactors, etc.) are situated in relation to the geometrical parameters of the area and various disposition in it of ventilation apertures were investigated. Experiments were conducted on the model of an indus-

*tation Techniques

CARD: 1/5

COUNTRY :
CATEGORY :

ABS. JOUR. : RZKhim., No. 1 1960, No. 1679

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : trial building 1,500 mm long, 800 mm wide and
cont'd 200, 400 and 600 mm high. Air at a temperature t_1 was introduced into the building through narrow slits 1,200 mm long, situated at the bottom on each side of the model, and was taken out at a temperature of t_2 through apertures located at the upper part of the model.* The temperature inside the model was measured with the aid of thermocouples disposed all along

*3 electric plates were installed inside the model.

CARD: 2/5

H

COUNTRY :
CATEGORY :

ABS. JOUR. : RZKhim., No. 1 1960, No. 1679

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT cont'd : the vertical cross section of the model. The different methods of introduction and withdrawal of air from the building under natural ventilation are discussed. It was shown that the coefficient B of the equation $t_{wz} - t_1 = B(t_2 - t_1)$ (where t_{wz} is the average temperature of the work zone) does not depend on the means of introduction and withdrawal of

CARD: 3/5

H

COUNTRY :
CATEGORY :

ABS. JOUR. : RZKhim., No. 1 1960, No. 1679

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : air and the heating power of the plates. B decreases rapidly upon increase of the size of the ventilation apertures and increases slowly with increase of the height of the building. A graphic dependence of B upon $(\Sigma F - F_n)/(f_1 + f_2)$ was established (where ΣF and F_n are the sum of the surfaces of building walls and of the floor surface, respectively, and f_1 and f_2 are areas of the air inlet and outlet,

cont'd

CARD: 4/5

II-15

H

COUNTRY :
CATEGORY :

ABS. JOUR. : RZKhim., No. 1 1960, No. 1679

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT cont'd : respectively). By using the ratio, it is possible to determine the fluctuation of temperature in the work zone. It was noted that in modeling buildings ventilated by aeration it is necessary to use the geometrical similarity of linear dimensions and equality of the products Gr·Pr where Gr and Pr are Grashof's and Prandtl's criteria, respectively. -- V. Berenfel'd

CARD: 5/5

CZECHOSLOVAKIA/Electronics - Photocells and Semiconductor Device H.

Abs Jour : Ref Zhur- Fizika, No 7, 1959, 15951

Author : Cihelka, J., Cerny, L., Husa, V., Kriz, J., Ladnar, J.

Inst : State Research Institute for Electric Power Engineering Prague, Czechoslovakia

Title : New Technology of Manufacture of High Power Germanium Diodes

Orig Pub : Slaboproudy obzor, 1958, 19, No 9, 589-592

Abstract : A feature of the described technology is simultaneous carrying out of the processes of production of p-n junctions and the soldering of the leads.

Card 1/1

621.316.57.064.45

135. INFLUENCE OF THE NATURAL FREQUENCY OF THE RECOVERY VOLTAGE UPON THE INTERRUPTION PERFORMANCE OF AIR-BLAST CIRCUIT BREAKERS. V.Huss and J.Cihelka. Elektrotech. Obzor, Vol. 47, No. 7, 349-54 (1958). In Czech.

Discusses the breakdown strength between contacts as influenced by air pressure, air current, electron emission and electrode evaporation. Gives oscillogram of air pressure in front and behind the quenching chamber as function of time after contact breaking. Measurements of the interruption performance of a customary circuit-breaker at 30, 19 and 9 kV as function of frequency, f, lead to the relation: $I = Cf^{\alpha}$, I being the highest current the circuit-breaker can interrupt, C, a voltage dependent coefficient and α a coefficient not dependent upon voltage. Observations of times at which the arc restrikes have shown that these occur essentially in two separate periods. N.Klein

TA 1/1

CIHELKA, J.

Contribution to the thermal solution of natural ventilation. Pt. 2. Influence of radiation of thermal sources on the heat balance of the room. p. 70.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technika spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia. Vol 2, no. 2, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959. Uncl.

CIHELKA, J.

Comments on the exception from CSN 06 0210 for calculation of heat losses in buildings. p. 134

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA. Praha, Czechoslovakia, vol. 2, no. 3, 1959

Monthly List of East European Accessions (EEAI), LC., Vol. 8, No. 9, September 1959
Uncl.

CIHELKA, J.

"Economy in determining size of heating devices in housing." p. 14.

VYNALEZY A NORMALISACE, OCHRANNE ZNAMKY, CHRANENE VZORY. (Urad pro vynalezy a normalisac). Praha, Czechoslovakia, Vol. 3, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

8(2) SOV/105-59-7-18/30

AUTHORS: Husa, V., Doctor of Technical Sciences,
Cihelka, J., Engineer

TITLE: A Method of Measuring the Re-establishment of the Electric Strength of an Open-air Switch (Metod izmereniya vosstanovleniya elektricheskoy prochnosti vozdushnogo vyklyuchatelya)

PERIODICAL: Elektrichestvo, 1959, Nr 7, pp 70 - 72 (USSR)

ABSTRACT: The method described is based upon the fact that if a breakdown occurs in the extinguishing chamber, it is impossible to hold up the discharge because a current passes through the circuit which is caused by its inductivity. Figure 1 shows the circuit for measuring electric strength. It contains three arc-extinguishers (three-phase switches), through which the same short-circuit current flows, connected in series. Parallel to the arc-extinguishers three condensers are connected, with $\frac{C_3}{C_2} \gg 1$, $\frac{C_2}{C_1} \gg 1$ and $\frac{C}{C_1} \gg 1$.

This is necessary in order that the full voltages may be applied to the arc-extinguishers. If a residual current flows after zero-passage in the switch, the voltage in the individual arc-extinguishers will not be proportional to the capacities. It is

Card 1/2

therefore necessary to connect a resistance R in series with the condensers, the magnitude of which is less than the residual resistance. This method makes it possible to determine 3 values of the breakdown voltage in the course of an experiment. Breakdown in the arc-extinguisher occurs before the zero-passage of the current in the capacities. Measurement is automatic if breakdown occurs at a voltage that is about equal to the peak voltage, when the current in the capacities is not equal to zero. Figure 3 shows the oscillogram of the current and of the voltages during the testing of an air switch, and figure 4 shows the dependence of electric strength on the magnitude of the switched-off current in form of a diagram. By means of the method described it is possible to test also an arc-extinguisher. There are 4 figures and 2 German references.

ASSOCIATION: Nauchno-issledovatel'skiy institut sil'notochnoy elektrotekhniki, Chekhoslovakiya (Scientific Research Institute for High-voltage Electrical Engineering, Czechoslovakia)

SUBMITTED: February 3, 1959

Card 2/2

CIHELKA, J.; HUSA, V.

Analysis of the volt-ampere characteristics of a germanium diode in the reverse and forward direction. p.379

ELETROTECHNICKY OBZOR. (Ministerstvo tezkeho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro eletrotechniju pri Ceskoslovenske adaemii ved) Praha, Cezecholovakia
Vol.48, no.7, July 1959

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11
Nov. 1959
Uncl.

CIHELKA, J.; CERNY, L.; HUSA, V.

Contribution to the problem of overvoltage in circuits with germanium. diodes and protection against it. p. 478.

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkiho strojirenstvi a Ceskoslovenske vedecka technicka spolecnost pro elektrotechniku pri Ceskoslovenske Akademia ved) Praha, Czechoslovakia. Vol. 48, no. 9, Sept. 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 9, no. 1, Jan. 1960.

Uncl.

CIHELKA, J

83993

Z/017/60/049/010/002/002
E192/E482

9,4340 (1143, 1160, 1331)

AUTHORS: Husa Václav, Inž dr., Cihelka Jaroslav, Engineer and Černý Ladislav, Engineer

TITLE: Analysis of Voltage-Current Characteristics of Silicon Diodes

PERIODICAL: Elektrotechnický Obzor, 1960 Vol.49,No.10,pp.530-537

TEXT: The characteristics of several silicon rectifier diodes are analysed. One type of the diode is made of n-type of material and results in a p-n-n^{+} junction. Another diode is made of type-p material and its base plate is alloyed with aluminium on one side and with AuSb on the other. In this way p^{+}-p-n junctions are obtained. First, the inverse current voltage-characteristics of n-type and p-type junctions are considered. The n-junctions had the following parameters: average resistivity of 100 Ω cm, thickness of the base plate of 0.5 mm and area of 150 mm^2. The measured characteristics of these junctions are shown in Fig.1 and 2; the figures show the current density in μA/cm^2. Theoretically the current density in the reverse direction is expressed by

$$J_n = J_o e^{-\alpha \frac{W}{kT}} \qquad (1)$$

Card 1/6

Z/017/60/049/010/002/002
E192/E482

Analysis of Voltage-Current Characteristics of Silicon Diodes

where α is a parameter contained between 1.0 and 0.5, W_i is the activation energy, k is the Boltzmann constant and T is the absolute temperature. If Eq.(1) is plotted to logarithmic scale, a straight line is obtained. Consequently, the curves of Fig.1 and 2 are plotted logarithmically in Fig.3. From this, it is seen that all the straight lines converge at a point P_1. This point corresponds to the temperature of 192°C. It is, therefore, possible to determine the activation energy. It is found from the graphs that for the voltage of 0.5 V the activation energy is 1.16 eV. This figure is in good agreement with the value of the activation energy quoted in the available literature. The p-type junctions had the following characteristics: average resistivity of 400 Ω cm, plate thickness of 0.5 mm and area of 75 mm^2. The reverse characteristics of this junction are shown in Fig.5; this is replotted logarithmically in Fig.6, where it is seen that the curves become equidistant straight lines. From these characteristics, it is found that the activation energy is 0.3 to 0.62 eV. These figures are comparatively low and it is thought that they are due to the acceptor energy level in the main band;

Analysis of Voltage-Current Characteristics of Silicon Diodes

the forward characteristics of the diodes were also measured. The n-type diode had the following parameters: average resistance of 100 Ω cm, plate thickness of 0.5 mm and junction area of 150 mm^2. The characteristics of this diode are plotted logarithmically for various temperatures in Fig.8. The p-type rectifier had an average resistivity of 400 Ω cm, thickness of 0.5 mm and junction area of 75 mm^2. The logarithmic plots of the characteristics of the element for various temperatures are shown in Fig.9. From the characteristics in Fig.8 and 9 it is seen that in the region of medium and high currents they can be approximated by straight lines which converge at a point P_2 for both types of junction. The voltage coordinate of P_2 corresponds to the activation energy of silicon (1.2 eV). The characteristics of germanium diode were also measured for the purpose of comparison; these were shown in Fig.5, from which it is seen that a P_2 has the coordinate of 0.73 V which corresponds to the activation energy of germanium.

Theoretically the forward characteristic of a silicon rectifier can be expressed by

Card 3/6

$$J = a e \left(\frac{l_p}{\tau_p} + \frac{l_n}{\tau_n} \right) N_o e^{-\alpha \frac{W_i}{KT}} \left[e^{\alpha \frac{eU}{KT}} - 1 \right] \qquad (5)$$

Analysis of Voltage-Current Characteristics of Silicon Diodes

where a is a constant, N_0 is the total number of electrons which can be produced by thermal ionization in one cm^3, L_p is the diffusion length of the holes, L_n is the diffusion length of the electrons, p_n is the concentration of the n-type holes, n_p is the concentration of the p-type electrons, τ_p is the life time of the holes, τ_n is the life time of the electrons. Eq.(5) can approximately be expressed by Eq.(7), where A is defined by Eq.(6). In logarithmic coordinates, Eq.(7) can be written as Eq.(8). If AN_0 is independent of voltage U, Eq.(8) represents a set of straight lines. If it is plotted in semi-logarithmic coordinate system, these straight lines pass through a point P_3. Consequently the curves of Fig.8 and 9 were plotted semi-logarithmically; the resulting characteristics are shown in Fig.12 and 13. From these characteristics, it is again possible to determine the activation energy of silicon. The results are in good agreement with the previous values. The set of the tangents in Fig.8 and 9, which pass through point P_2 can be expressed by

$$\frac{J_{pr}}{J_{pr1}} \approx \left(\frac{eU}{W_i}\right)^{\frac{\beta}{kT}} \qquad (11)$$

Card 4/6

Analysis of Voltage-Current Characteristics of Silicon Diodes

where J_{prl} is the current density at point P_2. The quantity β in Eq.(11) represents the diffusion potential V_d. This is given by

$$V_d = kT \ln \frac{n_n}{n_p} \qquad (12)$$

By combining these equations with the preceding formulas, it is found that the maximum diffusion potential is expressed by $V_{d\,max} = \alpha W_i$. From this it is concluded that by increasing the doping in a diode, point P_2 is shifted and the density of the forward current is increased. This was verified by means of a non-doped type-p diode; the characteristics of this device are shown in Fig.15 and 16. By comparing this with Fig.9 and 13, it is found that the inflection of the characteristics occurs at higher current densities in the presence of doping. The doping also increases the diffusion potential. The forward characteristic of n- and p-type junctions are also used to determine the ohmic drop in the junctions. The authors thank M.Kubat and A.Bürger of ČKD Stalingrad for help in their work and for lending the n-type diodes, to Dr.Trousil of the Czechoslovak Academy of Sciences for

Card 5/6

83993
Z/017/60/049/010/002/002
E192/E482

Analysis of Voltage-Current Characteristics of Silicon Diodes

supplying the p-type material, and to J.Kříž and J.Ladnar for preparation of the p-diodes. There are 17 figures and 20 references: 11 Czech, 2 Soviet, 6 English and 1 German.

ASSOCIATION: Státní výzkumný ústav silnoproudé elektrotechniky (State Research Institute for Power Engineering)

SUBMITTED: December 18, 1959

Card 6/6

84116

9.4300 (1035, 1138, 1143)

Z/017/60/049/011/011/013
E073/E535

AUTHORS: Husa, Václav, Engineer Doctor, Cihelka, Jaroslav, Engineer and Kříž, Josef

TITLE: Influence of the Ambient Atmosphere on the Surface Conductivity of Silicon

PERIODICAL: Elektrotechnický obzor, 1960, Vol.49, No.11, pp.596-600

TEXT: The paper presents a description of the measuring methods applied in the investigation of the influence of the external atmosphere upon the surface conductivity of silicon of the types p and n. The influence of moist nitrogen and dry oxygen was experimentally investigated. A sketch of the test-rig is shown in Fig.1. During the tests the temperature was maintained at 20°C. At first, nitrogen with increasing moisture content was fed in until the nitrogen had a 100% relative humidity. This was followed by feeding in dry oxygen so that the relative humidity dropped slowly to 30%. Following that, the cycle was repeated. It was found that the duration of the cycle did not affect the results. The inverse current increases with increasing relative humidity above 50%.

Card 1/3

84116

Z/017/60/049/011/011/013
E073/E535

Influence of the Ambient Atmosphere on the Surface Conductivity of Silicon

At the instant of feeding in oxygen there was a steep increase in the inverse current. With increasing humidity the conductivity has a minimum at about 50% humidity, whilst the presence of oxygen brings about an increase in the surface conductivity. In the case of n-type junctions, the surface conductivity increases monotonously with humidity without there being a minimum and with increasing oxygen content the surface conductivity decreases. A physical interpretation of the phenomena is given. Humidity represented by the OH group acts to the outside as a dipole with a positive charge so that it attracts surface electrons and intensifies type n conductivity. On the other hand, in the case of type p it repulses the free holes and,as a result of that, the surface concentration of the holes decreases. The oxygen has an electro-negative effect: it repulses free electrons on type n junctions, i.e. it weakens type n junctions,and it attracts holes in the case of type p junctions, i.e. it intensifies the type p junctions. On the basis of the obtained results

Card 2/3

84116

Z/017/60/049/011/011/013
E073/E535

Influence of the Ambient Atmosphere on the Surface Conductivity of Silicon

it is stated that the type of conductivity can be determined in certain cases by means of the oxygen atmosphere. The conductivity increases monotonously with increasing oxygen content in the atmosphere in the case of type p junctions and decreases monotonously with increasing oxygen in the atmosphere in the case of type n junctions. Increase in the humidity brings about a monotonous increase in the surface conductivity for type n junctions, whilst for type p junctions it brings about a drop at first until a certain minimum is reached and from then onwards the surface conductivity increases. p-type junctions are more stable with respect to humidity than n-type junctions. n-p-n transistors from p-silicon with a specific resistance of 10 Ω cm are practically stable with respect to humidity. There are 6 figures and 4 references: 2 Czech, 1 Soviet and 1 English.

ASSOCIATION: Státní výzkumný ústav silnoproudé elektrotechniky (Electrical Engineering State Research Institute)

SUBMITTED: July 20, 1960

Card 3/3

CIHELKA

(13) 182

Prague, Zdravotni Technika a Vzduchotechnika, Vol 5, No 1 62

Copyright: Publishing House of the Czechoslovak Academy of Sciences · Nakladatelstvi Ceskoslovenske akademie ved , Prague, 1962

1. "Models of Temperature Fields in the Hot-Air Heating of Small Rooms," Vladimir BASUS, Engr. and Josef JELINEK, CSc [Candidate of Sciences], Engr. of the Engineering Research Institute, CSAV [Ceskoslovenska akademie ved; Czechoslovak Academy of Sciences] (Ustav pro vyzkum stroju CSAV); pp 2-14.

2. "Effect of Air Flow on the Level and Distribution of the Concentration of Harmful Matters in Space," Ladislav OPPL, Engr, Dr, of the Institute of the Hygiene of Work and of Occupational Diseases (Ustav hygieny prace a chorob z povolani); pp 15-24.

3. "Brno Fair 1961; Sanitation and Air Technology," Miloslav JOKL, Engr, Karel CHDRICSEK, Engr, Vladimir SKOKAN Engr, and Otakar PRADA, Engr; pp 25-39.

4. "Conference on the Pure Atmosphere in Industrial Installations," PULKRABEK, CIHELKA, HICHEK, and Ladislav OPPL; pp 43-48.

5. "First National Conference on Aerosols," SP; p 50.

6. "Commission for Sanitation and Air Technology (Komise pro zdravotni techniku a vzduchotechniku), Cs. VTS [Ceskoslovenska technicko-vedecka spolecnost; Czechoslovak Technical-Scientific Society]" in a supplement entitled Zpravodaj, No 1, 62, 4 pages.

— 1/1 —

S/194/62/000/004/076/105
D295/D308

AUTHORS: Cihelka, Jaroslav, Černý, Ladislav, Husa, Václav, Kříž, Josef and Ladnar, Josef

TITLE: Device for the stabilization of the operation of semiconductor-rectifier sections connected in parallel (Patent)

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-56f (Czechosl. pat., cl. $21d^2$, 12/02; 21g, 11/02; $21d^3$, 2, no. 97375, 15.11.60)

TEXT: The principle of the distribution of the cooling medium in rectifiers with parallel-connected semiconductor diodes is outlined. When diodes are connected in series or in parallel, the problem of temperature stability is especially difficult, since it is impossible in practice to choose diodes having exactly the same characteristics and, in particular, the same temperature dependence on the current-voltage characteristic, which would enable us to use for them a common equipment for cooling or temperature regula-

Card 1/2

Device for the ...

tion. It is suggested in this connexion to use individual cooling of each diode, which eliminates the need of their selection. The cooling medium is fed from a common reservoir to each diode via distribution valves regulated by means of special equipment. The regulating action of the latter is based on utilizing the temperature dependence of the current passing through the diode. [Abstracter's note: Complete translation.]

Card 2/2

HUSA, Vaclav, inz., dr.; CIHELKA, Jaroslav, inz.

Recent research in semiconductors. El tech obzor 51 no.1:44-45 Ja '62.

1. Statni vyzkumny ustav silnoproude elektrotechniky, Bechovice

Z/017/62/051/003/002/002
D291/D304

AUTHORS: Husa, Václav, Doctor, and Cihelka, Jaroslav, Engineers

TITLE: Measuring the frequency characteristics of air-blast circuit breakers with the aid of the successive flash-over method

PERIODICAL: Elektrotechnický obzor, v. 51, no. 3, 1962, 114-117

TEXT: The article describes the use of the successive flash-over method to determine the dependence of the breaking capacity on the natural frequency of the recovery voltage of air-blast breakers. This method which has already been described by the authors of this article in a previous paper (Ref. 1: Elektrotechnický obzor (1960), no. 8, pp 417-420), has the advantage that conventional short-circuit tests are avoided and breaker poles are less damaged during tests. The shorting and measuring circuit, according to the new method, comprises capacities parallel connected to the serial blowout contacts. These capacities are dimensioned so that, when the short-circuit current is cut off,

Card 1/3

Measuring the frequency ...

the entire recovery voltage appears on the first blowout contact pair and has then a certain frequency (f_1). In case the first contacts do not break, the entire recovery voltage appears on the second contact pair and has then a certain frequency (f_2). The same procedure occurs when the second contacts do not break. By increasing the short-circuit current, recovery-voltage frequencies (f_1, f_2, and f_3) are also increased. When the short-circuit current reaches a certain value, a flashover occurs on the first blowout contacts, and the first point of the frequency characteristics is thus given. Further reference points of the frequency characteristic are determined by a further increase of the short-circuit current at instances when flashovers occur on the second and third blowout contacts. This method was used to measure the frequency characteristics of a CP 405/22-600 and a new type of AEG-Kassel 22 kV, 400 mva air-blast circuit breaker. Obtained results were in good agreement with values previously obtained by short-circuit tests. There are 9 figures, 2 tables and 2 Soviet-bloc references. (Technical Editor: Engineer K. Bauer).

Card 2/3

Z/017/62/051/003/002/002
Measuring the frequency ... D291/D304

ASSOCIATION: Státní výzkumný ústav silnoproudé elektrotechniky (State Research Institute for Heavy-Current Engineering)

SUBMITTED: December 18, 1959

Card 3/3

HUSA, Vaclav, inz., dr.; CIHELKA, Jaroslav, inz.

Automatic semiconducting rectifier. El tech obzor 51 no.2:90-91. F '62.

1. Statni vyzkummy ustav silnoproude elektrotechniky, Bechovice.

CZECHOSLOVAKIA

Engr Dr Jaromir CIHELKA and Karel KLEINBERG, Institute for Research on Machines of the Czechoslovak Academy of Sciences (Ustav pro vyzkum stroju CSAV [Ceskoslovenska Akademia Ved] Prague.

"Measurement of the Heating Characteristics of Electric Radiation Panels."

Prague, Zdravotni Technika a Vzduchotechnika, Vol 5, No 6, 1962; pp 243-252.

Abstract [French summary modified]: Comprehensive study of warming and cooling times of electric heat-convection panels to determine efficiency of utilization of energy during conditions of intermittent heating. The conclusion is that this efficiency is adequate to permit such use. Two tables, 8 diagrams; 2 Czech and 2 Western references.

1/1

CIHELKA, J., dr., inz.

Heating of apartments; a discussion. Paliva 42 no.9:283-284 S '62.

HUSA, Vaclav, inz., dr.; CIHELKA, Jaroslav, inz.

Measuring the frequency characteristics of air-blast circuit breakers by the method of successive flash-overs. El tech obzor 51 no.3:114-117 Mr '62.

1. Statni vyzkumny ustav silnoproude elektrotechniky.

HUSA, Vaclav, inz., dr., kandidat technickych ved; CIHELKA, Jaroslav, inz.

Controlled silicon diode made by the Siemens factory. El tech obzor 51 no.10:550 O '62.

1. Statni vyzkumny ustav silnoproude elektrotechniky, Bechovice.

CZECHOSLOVAKIA

CIHELKA, Jaromir, Engr, Dr, and KLEINBERG, Karel, Institute for Machinery Research (Ustav pro vyzkum stroju), Czechoslovak Academy of Sciences.

"Thermal Characteristics of Lamellar Heating Surfaces"

Prague, Zdravotni Technika a Vzduchotechnika, Vol 6, No 4, 1963, pp 174-178.

Abstract [Authors' German summary]: The article contains results of measuring the heat output and heat inertia in lamellar heating surfaces. Explenation is given of the heat transfer between the pipe and the lamella, and the usefulness is proved of the lamellar surfaces for interrupted heating systems.

1/1

CZECHOSLOVAKIA

CIHELKA, [affiliation not given].

"A Calculation of Heating by Means of Suspended Radiation Panels"

Prague, Zdravotni Technika a Vzduchotechnika, Vol 6, No 5, 1963, pp 225-228.

Abstract: A brief presenting equations for calculating the mean temperature of the upper and lower sides of panels, temperature of the ventilating air, the comfort index, total heat loss, and the heat output of the air preheater.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000309220011-3"

HUSA, Vaclav, inz., dr., kandidat technickych ved; CIHELKA, Jaroslav, inz.

Oscillatory processes in semiconductor rectifiers of transductor connections. El tech obzor 52 no.5:264-265 My '63.

HUSA, Vaclav, inz. dr., kandidat technickych ved; CIHELKA, Jaroslav, inz.

Optical quantum generators, lasers, powerful sources of electromagnetic waves. El tech obzor 52 no.6:318-320 Je '63.

HUSA, Vaclav, inz. dr., kandidat technickych ved; CIHELKA, Jaroslav, inz.

A new heavy-duty silicon transistor made by Siemens Factory. El tech obzor 52 no.6:323-324 Je '63.

1. Statni vyzkumny ustav silnoproude elektrotechniky, Bechovice.

HUSA, Vaclav, inz. dr., kandidat technickych ved; CIHELKA, Jaroslav, inz.

Operation of controlled silicon diodes. El tech obzor 52 no.6: 325-326 Je '63.

CIHELKA, Jaroslav, inz.; HUSA, Vaclav, inz. dr., kandidat technickych ved

Measurement of characteristics on the silicon power transistor of the State Research Institute of Heavy-Current Engineering. El tech obzor 52 no.10:540-544 O '63.

1. Statni vyzkumny ustav silnoproude elektrotechniky.

HUSA, Vaclav, inz., kandidat technickych ved; CIHELKA, Jaroslav, inz.

Direct-current amplifier with silicon valves for control purposes. El tech obzor 52 no.10:570-571 O '63.

1. Statni vyzkumny ustav silnoproude elektrotechniky.

CIHELKA, Jaromir, doc. inz. dr.

Effect of the exchange of air on the increase of temperature in factories during aeration. Zdravot tech 7 no.6:260-267 '64.

1. Chair of Heat Engineering and Air Pressure Engineering of the Czech Higher School of Technology, Prague.

L 8715-65 EWT(1)/EWG(k)/EEC(k)-2/T/EEC(b)-2/EWA(h) Pm-4/Pz-6/Peb IJP(c)/ ASD(a)-5/RAEM(t)/ESD(dp)

ACCESSION NR: AP4040759 Z/0017/64/053/006/0308/0310

AUTHOR: Cihelka, Jaroslav (Cihelka, Ya) (Engineer, Candidate of sciences); Husa, Vaclav (Husa, V.) (Doctor of engineering, Candidate of sciences)

TITLE: Parallel operation of power transistors 25 8

SOURCE: Elektrotechnicky obzor, v. 53, no. 6, 1964, 308-310

TOPIC TAGS: power transistor, parallel operation, switching power

ABSTRACT: Static parallel operation of power transistors is advocated as a means of increasing switching power. By increasing collector current, this arrangement also possibilifies an increase in the current amplification factor . Employment of an amplification cascade independent of temperature feasibilifies using elements with low β and high cutoff voltage $U_{EC_{max}}$; an element with high β and low $U_{EC_{max}}$ comprises the exciter stage. The parameters of the latter were taken as terminal resistance $R_t = 0.3$ ohm, $U_{EC_{max}} = 250$ v, and $\beta_{max} = 30$. Four types of power transistors were distinguished according to ranges of terminal resistance between 0.1 and 0.5 ohm; tests were run with two transistors in paral-

Card 1/2

L 8715-65
ACCESSION NR: AP4040759

lel having the following parameters, respectively: R_t = 0.15 and 0.18 ohm, U_{ECmax} = 150 and 110 v, and β_{max} = 22 and 20. With a 35-v storage battery as voltage source and a load resistance R_{th} = 3.35 ohms at R_t = 0.415 ohm, the total current to the two transistors was, respectively, 19 and 21 amps. The total collector loss of the two was 152 w, which necessitated putting them in a water-cooled housing. General criteria for system parameters are established in the article, and the results of studies on certain special cases encountered in practice are discussed. In respect to the on-off regime, the primary condition is that the R_t of both transistors be as constant as possible. The authors foresee the excitation of 4 or 5 transistors to generate currents up to 100 amps. Orig. art. has: 2 formulas and 6 figures.

ASSOCIATION: Statni vyzkumny ustav silnoproudu elektrotechniky (State Institute of High-Current Electrical Engineering)

SUBMITTED: 03May63 ENCL: 00 SUB CODE: EC

NO REF SOV: 000 OTHER: 002

Card 2/2

CIHELKA, Jaromir, doc. inz. dr.

Modeling ventilation equipment. Zdravot tech 7 no. 2:49-63 '64.

CIHELKA, Jaromir, inz., dr. KLEINBERG, Karel

Thermal characteristics of lamellar heating surfaces.
Zdravot tech 6 no.4:174-178 '63.

1. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved.

ROZAN, Josef; JARUSEK, Jaroslav; CIHELKA, Karel

Study of the effect of high temperatures on the destruction of varnish coatings. Sbor VSChT Pardubice no.1:189-204 '64.

1. Chair of Technology of Plastics of the Higher School of Chemical Technology, Pardubice. Submitted November 4, 1963.

CIHELKA, MIXAN

National conference on heating industrial plants. Zdravot tech 6 no.2:87-88 '63.

CZECHOSLOVAKIA

CIHELKA; Mixan [plant]

" National Conference on Heating of Industrial Plants "

Zdravotni Technika a Vzduchotechnika, Prague, Vol 6, №2,63, pp 87-88.

Abstract: A report on the fourth conference on heating of industrial plants organized by the professional group of the Czechoslovak Scientific and Technological Society on the 17 - 19 November,1962, in Ostrava, and initiated by the regional commission of public health technology and air conditioning, Ostrava, is given here. The main theme of discussions concentrates around problems of research and development, heating systems in various construction projects of industrial plants, new system designs and sources and heat distribution in plants.

1/1

S/276/63/000/002/027/052
A052/A126

AUTHORS: Lvovsky, Cyril, and Cihelka, Bohuslav

TITLE: A method of applying bi-component varnish coatings by centrifugal spraying in an electrostatic field and the device therefor

PERIODICAL: Referativnyy zhurnal, Tekhnologia mashinostroyeniya, no.2, 1963, 105, abstract 2B562 P. (Czech. pat., cl. 75c, 5/01, no. 100622, August 15, 1961)

TEXT: A method of applying bi-component varnish coatings in an electrostatic field is patented. The characteristic of the method is that both components are continuously mixed in the necessary proportion directly in the head of the spraying gun the internal space of which forms a space with walls inclined at 10-45°. Both components of the applied coating are supplied under pressure through separate pipes from a vessel divided by a partition into 2 containers the surface of which is proportional to the necessary content of a component in the mixture.

(Abstracter's note: Complete translation) V. Levinson

Card 1/1

SVOBODA, Milan; CIHELKA, Zdenek

Automatic primary diaphragm in fluoroscopy. Cesk. rentg. 12 no.3:206-209 Sept 58.

1. Ustav hematologie a krevni transfuse v Praze, reditel dr. J. Korejsi Chirana, n.p., zavod Modrany u Prahy, reditel J. Jozifek. M. S., Praha 1 -- Mala Strana, U zelezne lavky 6/557.
(FLUOROSCOPY, appar. & instruments
automatic primary diaphragm (Cz))

CIHIA, Z.; PLIVA, J.

General form of conditions for redundant sets of vibrational coordinates. Coll Cz Chem 26 no.8:1903-1908 '61.

1. Laboratory of Molecular Spectroscopy, Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

CIHLA, Bohuslav, inz.

A light garland roof truss. Inz stavby 6 no.1:21-24 Ja '58.

1. Vyvojove pracoviste Zelezaren Stalingrad, n.p.

CIHLA, ZDENEK

CZECHOSLOVAKIA/Processes and Equipment for Chemical Industries- Processes and Apparatus for Chemical Technology K-1

Abs Jour : Referat Zhur - Khimiya, No 9, 1957, 33242

Author : Cihla Zdenek, Schmidt Oskar
Inst :
Title : Heat Emission on Condensation of Steam at an Ellipsoid of Revolution.

Orig Pub : Chem. listy, 1956, 50, No 4, 495-502

Abstract : Equations are derived for the calculation of heat emission on film condensation of steam at the surface formed by an ellipsoid of revolution as such, or in combination thereof with a vertical cylinder. The derivation is based on the premises of the classical theory of Nusselt relative to the film condensation of steam.

Card 1/1

CIHLA, Z.

1

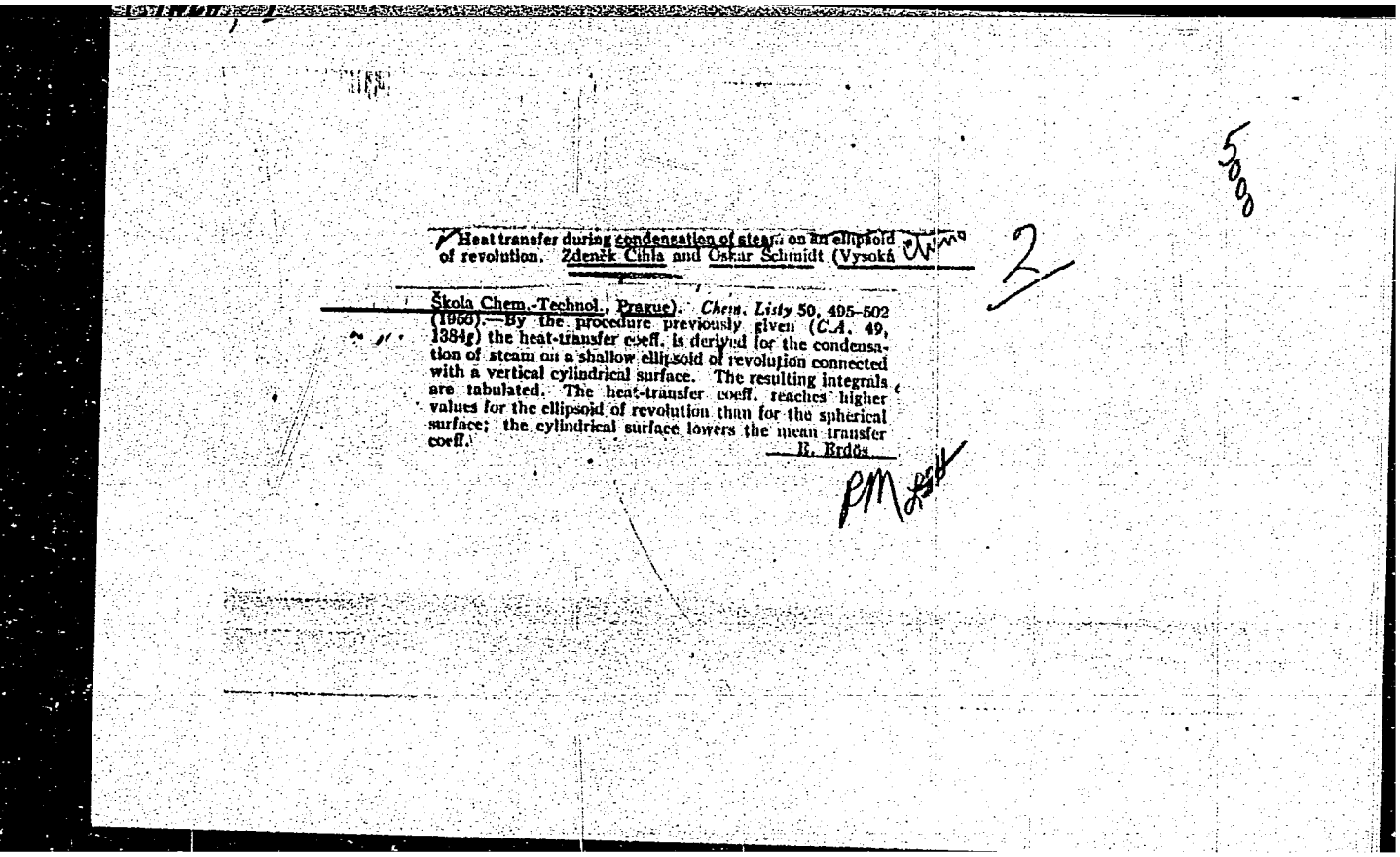
CZECHOSLOVAKIA

CIHLA, Z; FLIVA, J.

Institute of Physical Chemistry, Czechoslovak Academy of Science, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 5, 1963, pp 1232-1247

"Anharmonic Potential Functions of Polyatomic Molecules. V. Transformations of General Valence-Force Coordinates."



Heat transfer during condensation of steam on an ellipsoid of revolution. Zdeněk Cihla and Oskar Schmidt (Vysoká Škola Chem.-Technol., Prague). *Chem. Listy* 50, 495–502 (1956).—By the procedure previously given (*C.A.* 49, 1384g) the heat-transfer coeff. is derived for the condensation of steam on a shallow ellipsoid of revolution connected with a vertical cylindrical surface. The resulting integrals are tabulated. The heat-transfer coeff. reaches higher values for the ellipsoid of revolution than for the spherical surface; the cylindrical surface lowers the mean transfer coeff.

—E. Erdős

CIHLA, Z.; SCHMI T, O.

"Study of the flow of liquid when freely trickling over the packing in a cylindrical tower. In English."

p. 896 (Collection of Czechoslovak Chemical Communications, Sbornik, Chekhoslovatskikh Khimicheskikh Rabot) Vol. 22, no. 3, June 1957
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7,no. 4
April 1958